DOCUMENT-IDENTIFIER: US 6078756 A
TITLE: Photographic and data transmission system for capturing images and
magnetic data

BSPR:
It is known in the art that a film or an electronic camera can record image
information on either a film or store the information in electronic memory. It
is also known in the art that a wireless transceiver can be used to **transmit**
and receive data. An example of such a device is shown in the copending Ser.
No. 08/707,265 and in U.S. Pat. No. 4,957,348. Digital cameras also have the
capability of storing additional information along with the digital image. An
example of this is the Kodak DCS 460a digital camera, which is capable of
storing voice annotation along with the digital image. Moreover, the film used
by the Advanced Photo System.TM., which is sold by the Eastman Kodak Company,
allows a film camera to store digital information on a clear magnetic coating
on the photographic film. This feature is disclosed in U.S. Pat. No.
5,194,892.

BSPR:
A problem with a wireless system is the number of unrelated wireless signals
being **transmitted** at a given time in a given locale, which can lead to
interference or to the recording of the wrong wireless signal. It would be
desirable to find a convenient way to combine the information handling
capability of modern cameras with image recording so that information can
easily be accessed about a photographed item without having to depend upon the
transmission of wireless signals.

DEPR:
As shown in FIG. 3, the digital camera 16 captures each image on

a
charge-coupled device (CCD) 62, digitizes the image in an analog-to-digital
(A/D) converter 64, and processes the digital image in a signal processing
section 66 for storage in the recording section, which may include an image
memory 68, such as internal Flash EEPROM or a removable memory card. In
accordance with the invention, the magnetic reading head 20 is contained in an
attachment 70 which clips onto a frame 72 that is fastened to the digital
camera 16. Data obtained from the magnetic strip 10 is stored in a short-term
buffer 74 and **transmitted** by cable connection 76 between corresponding RS-232
port connectors 78, 80 on the attachment 70 and the camera 16. The data
recovered from the magnetic strip 10 is stored in a data memory 82. In
accordance with the invention, the logic control unit 32 drives the signal
processing section 66 to store the information related to the product in the
image memory 68 along with the digital image. An "extra data" bit may also
stored to permit a downstream processor to determine that additional product
data is included with the image.

DEPR:
In the case of the Advanced Photo System.TM. camera 12, as shown in FIG. 5,
the **transmitted** data is stored on the magnetic portion 48 of the photographic
film 50. Once the film is processed in a film processor 100, the developed
film is scanned by a film scanner 102. When the film scanner 102 senses the
presence of the data stored on the magnetic portion 48 of the film, this data
is read by the scanner 102 and downloaded to the host computer 84. Thereafter,
the process is similar to that outlined in connection with FIG. 4, i.e., the
telecommunication connection 86 is made, and the data at the URL site on the
network server 88 is downloaded to the host computer 84. In this case,

however, the data may be sent back to the processing station to be printed
along with the photographs. In a preferred embodiment, the film scanner 102
also allows for digitization of the images captured on film. This will give
the customer the extra benefit of getting the information and images in either
hardcopy print format or have it stored on one of many formats of removable
media such as CD-R.

CCXR:
396/319